MICROELECTRONIC ASSEMBLY WITH UNDERCHIP OPTICAL WINDOW, AND METHOD FOR FORMING SAME

ABSTRACT OF DISCLSOURE

A microelectronic assembly includes an integrated circuit die spaced apart from a substrate and connected by bump interconnections, and an polymeric encapsulant molded about the die. The encapsulant extends into the gap about the interconnections, but is confined to the perimeter so as to define an underchip optical window adjacent the central region of the die. The window allows optical access to the active face of the die, including to optical sensors thereon. During manufacture of the assembly, following attachment of the die on the substrate, a molding cavity is positioned about the die on the substrate. Polymeric material is injected into the cavity at a pressure effective to initiate flow into the gap about the solder bump interconnections. The pressure is then reduced to prevent flow of the polymeric material into the central region.